



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RBE350A93-3302-02
Job Sheet 171379



001968

Part No: RBE350A93-3302-02

Job Qty: 6 ea

Part Name: T/R Hub Lock Wrench



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/31/18

Job Tracking No:

Due Date: 2/9/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG RBE350A93-3302-02 REV:11 IPP REV A 18.01.30 NEW ISSUE RQ VERIFIED BY DP

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	6 Ea		2/8/18	0.00	0.00	Start Up Small Fab-4		ML
100	Small Fab	6 pcs		2/9/18	0.08	0.40	Small Fab-9		ML
110	QC	6 pcs		2/9/18	0.00	0.00	QC5		PD 12-3-23
130	Packaging	6 pcs		2/9/18	0.00	0.00	Packaging3-2		SL
140	QC21-FG	6 Ea		2/9/18	0.00	0.00	QC21		

Part Op 100 - Assemble
Descriptions: 130 - Identify and Stock

DAS
21
9-80

MAR 7 2018
MAR 29 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
3896T31	Ferule 1/16 X 3/8" - Aluminum	24 Ea (4 ea)	90-Start up Operation	
90174A113	Retaining Pin	12 Ea (2 ea)	90-Start up Operation	
90177A218	Split Ring	24 Ea (4 ea)	90-Start up Operation	
90272A189	Machine Screw	6 Ea (1 ea)	90-Start up Operation	
94975A162	Quick Release Pin	6 Ea (1 ea)	90-Start up Operation	
CL-2-C	Lanyard Wire	9.9960 ft (1.666 ea)	90-Start up Operation	
RBE350A93-3302-02-1	Handle	6 Ea (1 ea)	90-Start up Operation	
RBE350A93-3302-02-3	Pin	12 Ea (2 ea)	90-Start up Operation	
RBE350A93-3302-02-5	Extension Handle	6 Ea (1 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	3896T31	24	274	0
	90174A113	12	0	0
	90177A218	24	0	0
	90272A189	6	0	0
	94975A162	6	0	0
	CL-2-C	10	514	0
	RBE350A93-3302-02-1	6	0	0
	RBE350A93-3302-02-3	12	0	0
	RBE350A93-3302-02-5	6	0	0

Part Specifications

ML
3-29

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part: _____ NCR _____ Date: _____ _____ _____		DISPOSITION Dart Aerospace Ltd. 1270 Aberdeen Street Hawkesbury, ON K6A 1K7 CANADA TEL.: 1 613 632-5200 Email: sales@dartaero.com www.dartaerospace.com Date: 03/27/18		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">Skid-tube</td><td style="width:5%;">☐</td> <td style="width:15%;">Cross tube</td><td style="width:5%;">☐</td> <td style="width:15%;">Water Jet</td><td style="width:5%;">☐</td> <td style="width:15%;">Engineering</td><td style="width:5%;">☐</td> </tr> <tr> <td>Machining</td><td>☐</td> <td>Small Fab</td><td>☐</td> <td>Prod. Eng. Coord.</td><td>☐</td> <td>Quality</td><td>☐</td> </tr> <tr> <td>Thermoforming</td><td>☐</td> <td>Finishing</td><td>☐</td> <td>Rec/Store/Packaging</td><td>☐</td> <td>Other</td><td>☐</td> </tr> <tr> <td>Large Fab</td><td>☐</td> <td>Composite</td><td>☐</td> <td>Supplier</td><td>☐</td> <td></td><td></td> </tr> </table>				Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐	Machining	☐	Small Fab	☐	Prod. Eng. Coord.	☐	Quality	☐	Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐	Large Fab	☐	Composite	☐	Supplier	☐																																																						
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Manufacturing Process _____ Past Due ☐		OTHER : _____																																																																																									

Specifications could not be found.

Plex 1/31/18 1:29 PM Dart.lajeunesse.marie

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

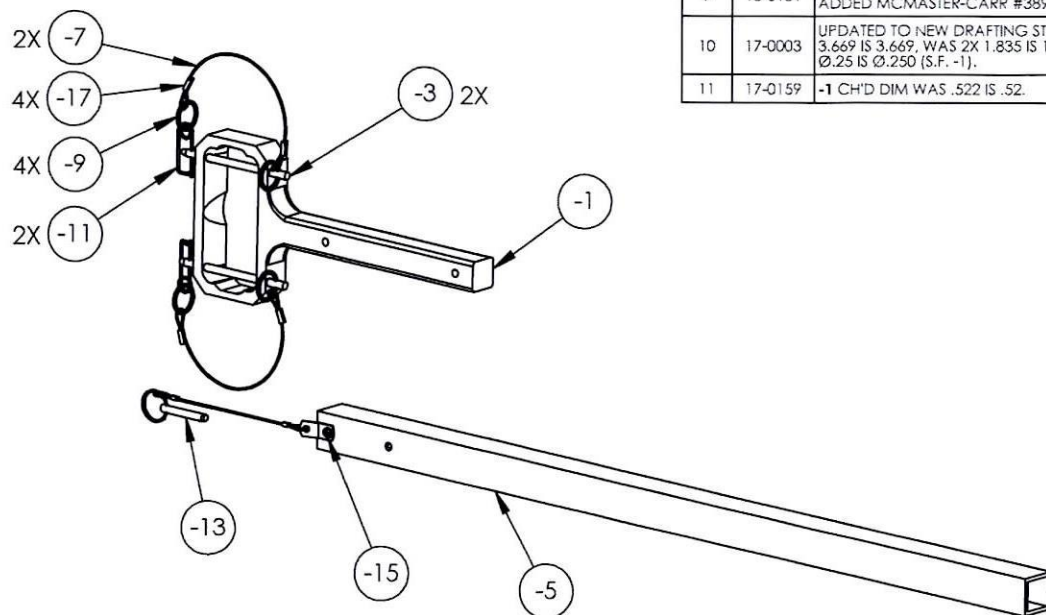
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

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REVISIONS				
REV	ECR	DESCRIPTION	DATE	INITIAL
1		-1 CH'D INSIDE ANGLED RADIUS FROM R.75 TO R.375, CH'D DIM WAS 1.122 IS 1.	12/5/2008	WP DW
2		-1 ADDED Ø.250 HOLE. -5 ADDED #8-32 HOLE & Ø.250 HOLE.	3/18/2009	WP DW
3		-1 ADDED 1 INCH SQUARE DIM, CH'D DIM TO 2.309. -5 CH'D OD & ID DIMS.	4/29/09	RJC
4		-5 DELETED ENGRAVE NOTE.	6/1/2009	RJC
5		-1 ADDED TOLERANCE 1.00 - .98 TO HANDLE. -3 SHORTENED PIN BY 3/8 ON BOTH ENDS. -5 EXTENDED FROM 16.1 TO 30.0, MOVED PIN HOLE FROM 1.25 TO 3.00, CH'D MATERIAL WAS STEEL IS ALUMINUM.	10/6/2009	WP DW
6		-1 CH'D TOOLING HOLE WAS Ø.266 IS Ø.250, ADDED ENGRAVE NOTE. -5 ADDED ENGRAVE, CH'D TOOLING HOLE WAS Ø.266 IS Ø.250.	12/16/2010	RJC RW
6A		-5 CH'D TUBE WALL THICKNESS WAS .105 IS .125.	5/10/2012	RJC GEB2
7		-1 CH'D DIM WAS Ø.250 IS Ø.250 +.005 -.000.	4/18/2013	CFS JG
8A		CORRECTED T/N WSS RBEA93-3302-02 IS RBE350A93-3302-02.	11/5/2013	RJC RW
9	15-0131	-7 CH'D WAS MCMASTER-CARR #30345T15 IS CARR LANE #CL-2-C. -9 CH'D QTY. WAS 2 IS 4. -17 ADDED MCMASTER-CARR #3896T31.	6/12/2015	RJC JAG
10	17-0003	UPDATED TO NEW DRAFTING STANDARD. -1 CH'D DIM WAS 3.071 IS 3.07, WAS 5.315 IS 5.32, WAS 2X 3.669 IS 3.669, WAS 2X 1.835 IS 1.835, WAS 4X .190 IS 2X .190. ADDED DIM .522. -3 CH'D DIM WAS Ø.25 IS Ø.250 (S.F. -1).	2/28/2017	RJC SM
11	17-0159	-1 CH'D DIM WAS .522 IS .52.	6/21/2017	RJC JAG



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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 171379 MJS

JAN 31 2016

NOTE:
ORIGINAL No. REF: RBEA93-3302-2 = 350A93-3302-02.

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	P.G.
			-1	1	HANDLE	6061		2
			-3	2	PIN	S.S.		3
			-5	1	EXTENSION HANDLE	ALUMINUM SQ. TUBE		4
		B/O	-7	2	LANYARD	COATED STEEL	Ø1/16 X 8 7X7 CABLE (CARR LANE #CL-2-C)	1
		B/O	-9	4	SPLIT RING	STEEL	Ø1 O.D. X 1/8 (MCMASTER-CARR #90177A218)	1
		B/O	-11	2	WIRE LOCKING PIN	STEEL	Ø1/4 X 1-1/16 USABLE (MCMASTER-CARR #90174A113)	1
		B/O	-13	1	QUICK RELEASE PIN W/LANYARD	S.S.	Ø1/4 X 1.3 USABLE (MCMASTER-CARR #94975A162)	1
		B/O	-15	1	MACHINE SCREW	STEEL	#8-32 UNC-2A (MCMASTER-CARR #90272A189)	1
		B/O	-17	4	FERRULE	ALUMINUM	Ø1/16 X 3/8 (MCMASTER-CARR #3896T31)	1

DART AEROSPACE	
TITLE T/R HUB LOCK WRENCH	
DWG NO. RBE350A93-3302-02	REV 11
MAT'L HEAT TREAT FINISH SPEC	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125 ✓	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
DRAWN BY: PERRITT CHECKED: DUERFELDT OPPTS APPR: ANDERSON QA APPR: LINDSAY APPROVED: MACKOVJAK	
USED ON MODEL EUROCOPTER 350/355	
SCALE 1:6	DATE 10/20/2008
SHEET 1 OF 4	